(b) At the beginning of the basic inspection period, the CuSum value is set equal to the starting value ("S") for the specified CuSum plan. The CuSum value is then determined for each consecutive subgroup as follows:

(1) Add the number of defects for the present subgroup to the CuSum value of the previous subgroup.

(2) Subtract the subgroup tolerance ("T").

(3) The CuSum value is reset in the following situations; however, determine portion of production acceptability (see § 42.133) prior to resetting the CuSum value:

(i) Reset the CuSum value to zero (0) if the CuSum value is less than zero (0).

(ii) Reset the CuSum value to the acceptance limit ("L") if the CuSum value exceeds the acceptance limit ("L").

§ 42.133 Portion of production acceptance criteria.

(a) The acceptability of a portion of production is determined by comparing the calculated CuSum value with the acceptance limit ("L") for the specified AQL.

(b) A portion of production is acceptable if the CuSum value, calculated from the subgroup representing that portion, is equal to or less than the acceptance limit ("L") for all classes of defects.

(c) A portion of production is rejected if the CuSum value, calculated from the subgroup representing that portion, exceeds the acceptance limit ("L") for one or more classes of defects.

§ 42.134 Disposition of rejected portions of production.

Rejected portions of production from the same basic inspection period may be reworked, combined together to form a lot, and resubmitted for inspection under the criteria for tightened inspection using stationary lot sampling procedures described in subpart B of this part.

§ 42.135 Normal, tightened or reduced on-line inspection.

(a) Normal, tightened and reduced on-line sampling plans are specified in § 42.132 (Determining cumulative sum values). Normal plans shall be used except when the history of inspection permits reduced inspection or requires tightened inspection.

(b) Switching rules: Normal on-line inspection procedures shall be followed except when conditions in paragraph (b) (1) or (3) of this section are applicable or unless otherwise specified. Application of the following switching rules will be restricted to the inspection of production for one applicant at a single production location and will be based upon records of original inspections of production (excluding resubmitted portions previously rejected and reworked) at that same location.

(1) *Normal inspection to reduced inspection.* When normal inspection is in effect, reduced inspection shall be instituted provided that reduced inspection is considered desirable by the Administrator and further provided that all of the following conditions are satisfied for each class of defect:

(i) The preceding 40 consecutive portions of production have been on normal inspection and no more than one of these portions has been rejected on original inspection; and

(ii) The total number of defects in the subgroups (1000 sample units) from these 40 consecutive portions of production is less than or equal to the following limit numbers for the specified AQL's:

Acceptable quality levels	Limit No.
0.25	0
1.5	9
6.5	54

(2) *Reduced inspection to normal inspection.* When reduced inspection is in effect, normal inspection shall be reinstituted if any of the following occurs:

(i) More than one portion of production in any 40 consecutive portions of production is rejected on original inspection; or

(ii) Production becomes irregular (delayed or accelerated); or

(iii) Other valid conditions warrant that normal inspection shall be reinstituted.

(3) *Normal inspection to tightened inspection.* When normal inspection is in

effect, tightened inspection shall be instituted when two out of five consecutive portions of production have been rejected.

(4) *Tightened inspection to normal inspection.* When tightened inspection is in effect, normal inspection shall be reinstituted when five consecutive portions of production have been considered acceptable.

(c) When the rules require a switch in the inspection status because of one or more classes of defects, all classes of defects shall be inspected under the new inspection criteria. At the option of the user of the service, and when approved by the Administrator, such user may elect to remain on normal inspection when qualified for reduced inspection, or on tightened inspection when qualified for normal inspection.

§ 42.136 Applicability of other procedures.

When appropriate, the procedures for classifying and recording defects in § 42.106 and for appeal inspections in § 42.108 also apply to on-line sampling and inspection.

Subpart E—Miscellaneous

AUTHORITY: Agricultural Marketing Act of 1946, as amended (7 U.S.C. 1621 *et seq.*).

§ 42.140 Operating Characteristic (OC) curves for on-line sampling and inspection.

(a) This section contains the Operating Characteristic (OC) curve for each of the sampling plans given in Tables I, I-A, II, II-A, III, and III-A. The OC curve and the corresponding sampling plans are listed by AQL.

(b) Different acceptance and rejection criteria are provided for each AQL. The criteria for each AQL must be obtained from the applicable sampling plan tables.

(c) The curves show the ability of the various sampling plans to distinguish between good and bad lots. This can be illustrated by examining OC curve 6 for an AQL of 0.25 defects per hundred units in the Reduced and Normal Inspection Plans. If the quality of the lots submitted for inspection is poorer than the AQL of 0.25 defects per hundred units, fewer lots will be accepted.

For example, OC curve 6 shows that when the quality of lots submitted for inspection is 1.0 defects per hundred units, only 26 percent of the lots are expected to be accepted. Conversely when the quality of the lots submitted for inspection is better than the AQL of 0.25 defects per hundred units, most lots are expected to be accepted. For example, the same OC curve 6 shows that when the quality of lots submitted for inspection is 0.10 defects per hundred units, about 99 percent of the lots are expected to be accepted.

(d) The table of sampling plans that correspond to OC curve 6 can be found over the curves for an AQL of 0.25 defects per hundred units in the Reduced and Normal Inspection Plan. An examination of this table reveals that there is one single and one double sampling plan that have OC curves comparable to OC curve 6. The first plan listed is a single plan requiring the inspection of 500 individual containers. Under this plan the lot is accepted as meeting the requirements for an AQL of 0.25 if there are 3 or less defects in the sample or rejected if there are 4 or more defects in the sample.

(e) The next plan that is listed in the column headed 6 for an AQL of 0.25 is a double sampling plan that requires the initial inspection of 228 individual containers. The lot will be accepted as meeting the requirements of an AQL of 0.25 if there are no defects in the sample, and rejected if there are 3 or more defects in the sample. In the event that the number of defects is between acceptance (0) and rejection (3) numbers, additional containers must be inspected. In this case, the table indicates that a total of 516 containers must be inspected before a decision can be made to either accept or reject the lot. This will require the inspection of 288 more containers (516 − 228 = 288).

If there are 3 or less defects in the total sample, the lot will be accepted. If there are 4 or more defects in the total sample, the lot will be rejected. The other double sampling plans operate in a similar manner with the only differences being the sample sizes and acceptance and rejection numbers.